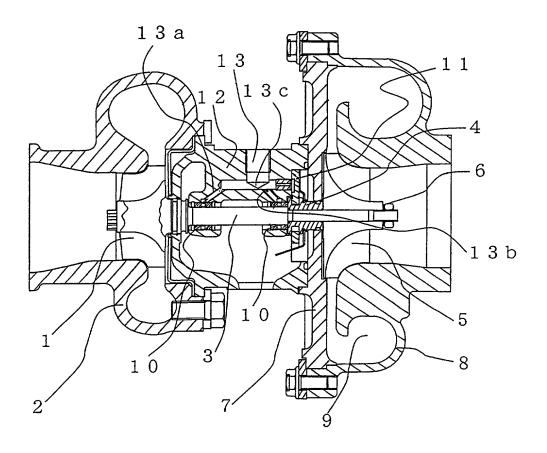
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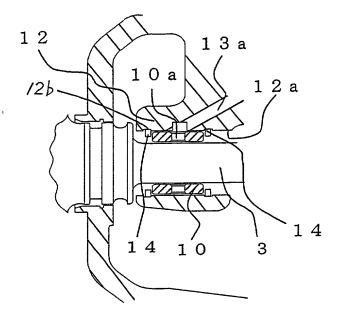
FIG. 1



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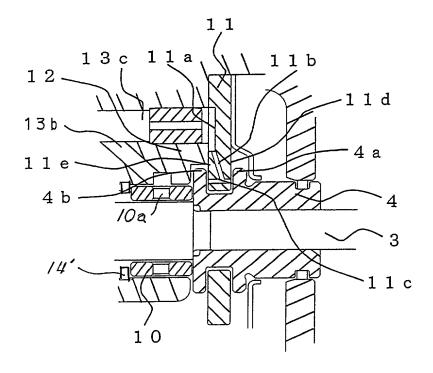
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FIG. 2



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FIG. 4

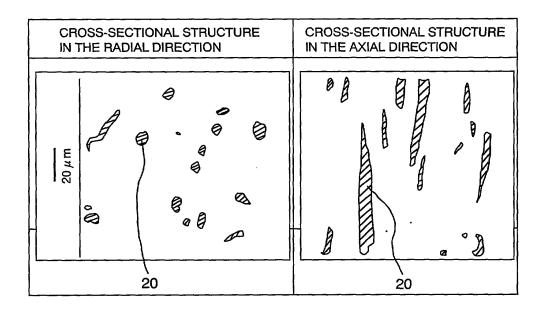


FIG. 5

MATERIAL	MAIN CHEMICAL COMPONENTS %								
	Cu	Ai	Mn	Si	Pb	Fe	Sn	Zn	
Α	70.0				6.52	≦ 0.1		bal	
В	78.2				10.5	0.11	bal	0.83	
С	60.8				≦ 0.1	≦ 0.1		bal	
D	60.2				1.30	≦ 0.1		bal	
E	62.1	3.05	3.16	0.92	≦ 0.2			bal	
F	58.3	0.69	3.72	1.46				bal	

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FIG. 6

Mn-Si COMPOUND AND DIRECTION OF SLIDING	SLIDING PERPENDIC- ULAR TO THE DIAME- TER DIRECTION	SLIDING PARALLEL TO THE LONGITU- DINAL DIRECTION	SLIDING PERPENDIC- ULAR TO THE LONGI- TUDINAL DIRECTION	
SKETCH (ARROW:SLIDING DIRECTION)		20	20	
ABRASION AMOUNT FOR COMPARISON	6.8	4.5	1.0	

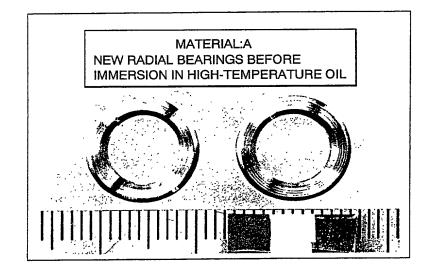
MATERIAL	Α	В	С	D	E	F
TEMPERATURE ℃ FOR EVALUATION		18	250			
CHANGE IN WEIGHT FOR COMPARISON	59.2	1065	2.2	1.6	1.3	1.0
JUDGMENT	GOOD	BAD	VERY GOOD	VERY GOOD	VERY GOOD	VERY GOOD

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FIG. 8

MATERIAL SPEED	А	В	С	D	E	F	REMARKS
1.2 m/s	17	21	16	69	1.7	0.87	LOW-SPEED CONDITION
7.2 m/s	17	15	23	22	1.7	0.92	HIGH-SPEED CONDITION
AVERAGE	17	18	20	46	1.7	0.90	(LOW SPEED+ HIGH SPEED)/2
ABRASION AMOUNT FOR COMPARISON	19	20	22	51	1.9	1.0	
JUDGMENT	GOOD	GOOD	GOOD	BAD	VERY GOOD	VERY GOOD	



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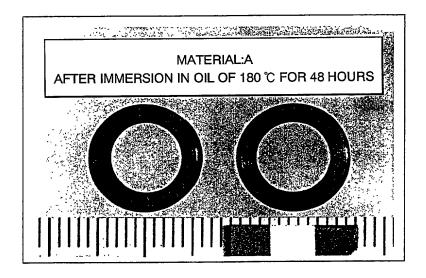
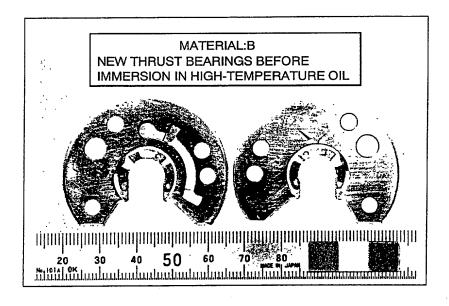


FIG. 11



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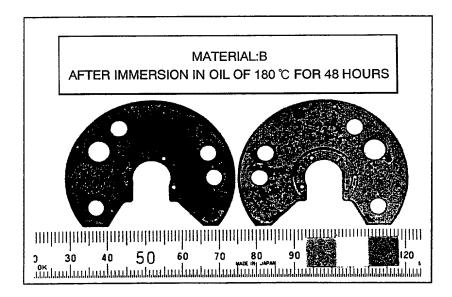
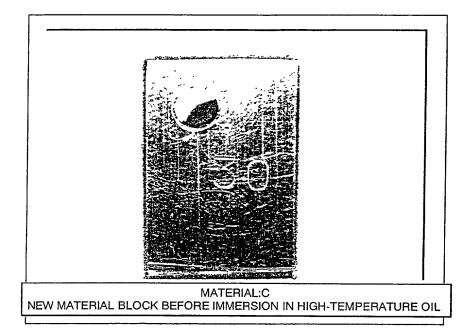


FIG. 13



Crowell & Moring LLP Customer Service No. 23911

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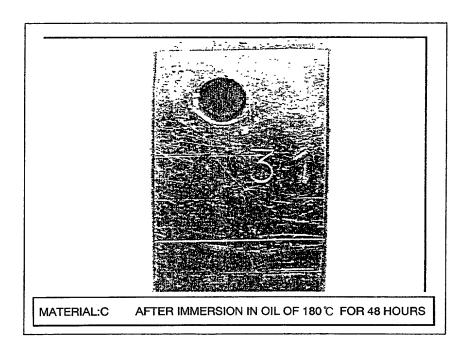
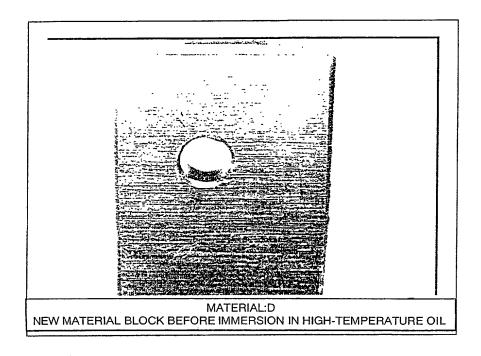


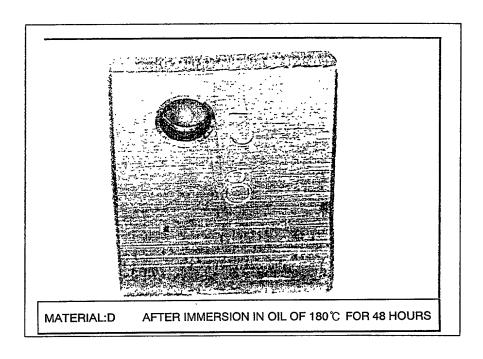
FIG. 15

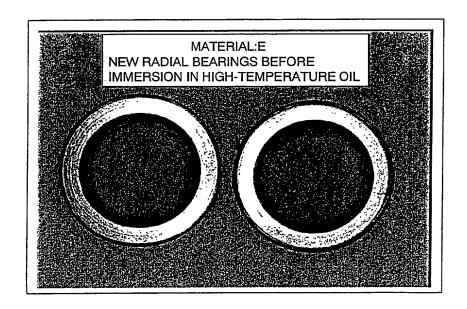


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FIG. 16





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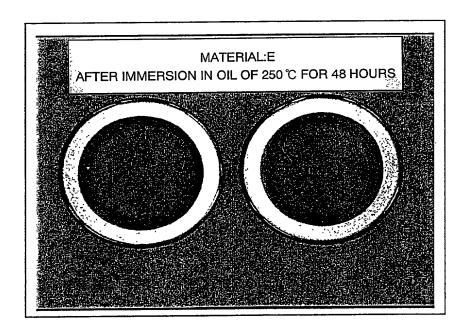


FIG. 19

